

Translation

PATENT COOPERATION TREATY

PCT/EP2003/014290



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000054194	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/014290	International filing date (day/month/year) 16 December 2003 (16.12.2003)	Priority date (day/month/year) 20 December 2002 (20.12.2002)
International Patent Classification (IPC) or national classification and IPC C07C 263/10, 265/14, B01J 10/00		
Applicant BASF AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 23 June 2004 (23.06.2004)	Date of completion of this report 03 February 2005 (03.02.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/014290

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed
- ☒ the description:  
 pages \_\_\_\_\_ 1-9 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_ 1-7 \_\_\_\_\_, filed with the letter of \_\_\_\_\_ 19 October 2004 (19.10.2004)
- ☒ the drawings:  
 pages \_\_\_\_\_ 1/1 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/EP 03/14290

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims		YES
	Claims	1 - 7	NO
Inventive step (IS)	Claims		YES
	Claims	1 - 7	NO
Industrial applicability (IA)	Claims	1 - 7	YES
	Claims		NO

### 2. Citations and explanations

- D1: WO 99/54289 A (DEN ABEEL PETER VAN; PEE WILLY VAN (BE); NEVEJANS FILIP (BE); SCHW), 28 October 1999 (1999-10-28)
- D2: US-A-3 631 092 (KAN PETER T ET AL), 28 December 1971 (1971-12-28)
- D3: US-A-5 925 783 (SUNDERMANN RUDOLF ET AL), 20 July 1999 (1999-07-20)
- D4: US-A-3 234 253 (DU PONT DE NEMOURS), 8 February 1966 (1966-02-08)
- D5: DE 17 68 439 A (GNI I PI ASOTNOJ PROMISCHLENNO), 18 November 1971 (1971-11-18)

- The present application relates to a process for producing isocyanates by reacting amines with phosgene and characterised in that the phosgene-containing feedstock stream contains 1.3 to 15% by weight hydrogen chloride. The application also relates to a plant for producing isocyanates by reacting primary amines with phosgene, the plant comprising an amine tank, a phosgene tank, a mixing device, a reactor and a reprocessing device, and being characterised in that the phosgene-containing feedstock stream supplied from the phosgene tank to the mixing device contains 1.3% to 15% by weight

hydrogen chloride.

2. D1 discloses a process for producing isocyanates by reacting amines with phosgene and characterised in that the phosgene-containing feedstock stream contains 10 to 30% by weight hydrogen chloride. It also discloses a plant for producing isocyanates by reacting primary amines with phosgene, the plant comprising an amine tank, a phosgene tank, a mixing device, a reactor and a reprocessing device for carrying out said process (see the passages cited in the search report).
3. D2 discloses processes for producing isocyanates by reacting amines with phosgene and characterised in that the phosgene-containing feedstock stream contains 33 to 300% by weight hydrogen chloride. It also discloses a plant for producing isocyanates by reacting primary amines with phosgene and comprising an amine tank, a phosgene tank, a mixing device, a reactor and a reprocessing device for carrying out said process (see the passages cited in the search report).
4. D3 discloses a process for producing isocyanates by reacting amines with phosgene and characterised in that the phosgene-containing feedstock stream contains 1.5 to 2% by weight hydrogen chloride. It also discloses a plant for producing isocyanates by reacting primary amines with phosgene and comprising an amine tank, a phosgene tank, a mixing device, a reactor and a reprocessing device for carrying out said process (see the passages cited in the search report).

5. D4 discloses a process for producing isocyanates by reacting amines with phosgene and characterised in that the phosgene-containing feedstock stream contains more than 0.8% by weight hydrogen chloride. It also discloses a plant for producing isocyanates by reacting primary amines with phosgene and comprising an amine tank, a phosgene tank, a mixing device, a reactor and a reprocessing device for carrying out said process (see the passages cited in the search report).
6. D5 discloses plants for producing isocyanates by reacting primary amines with phosgene and comprising an amine tank, a phosgene tank, a mixing device, a reactor and a reprocessing device (see the passages cited in the search report).

## Novelty

7. The subject matter of claims 1-7 is not novel (PCT Article 33(2)).
- 7.1 D1 discloses a process for producing isocyanates by reacting amines with phosgene and characterised in that the phosgene-containing feedstock stream contains (before the reaction) 10 to 30% by weight hydrogen chloride. It also discloses a plant for producing isocyanates by reacting primary amines with phosgene and comprising an amine tank, a phosgene tank, a mixing device, a reactor and a reprocessing device for carrying out said process (see the passages cited in the search report). The subject matter of claims 1-7 is therefore not novel.
- 7.2 D3 discloses a process for producing isocyanates by

reacting amines with phosgene and characterised in that the phosgene-containing feedstock stream contains (before the reaction) 1.5 to 2% by weight hydrogen chloride. It also discloses a plant for producing isocyanates by reacting primary amines with phosgene and comprising an amine tank, a phosgene tank, a mixing device, a reactor and a reprocessing device for carrying out said process (see the passages cited in the search report). The subject matter of claims 1-7 is therefore not novel.

#### Observation

8. At present, it is not possible to determine what part of the application could form the basis for a new allowable claim.